

WE CLAIM:

1. An accumulator assembly comprising at least two accumulators being hydraulically interconnected to the same source of hydraulic fluid, each accumulator containing an energy absorbing medium which is compressible when a movable barrier which separates the hydraulic fluid from the energy absorbing medium is acted upon by an increase in pressure of the hydraulic fluid, wherein at least one of said at least two accumulators contains a compressibility limiter which interrupts the compressibility of the energy absorbing medium within the accumulator and at least one of said at least two accumulators does not contain a compressibility limiter so that the energy absorbing media therein may be fully compressed by the hydraulic fluid.

2. The accumulator assembly of claim 1 wherein the movable barrier in the at least one accumulator containing a compressibility limiter is a movable piston which, when acted upon by an increase in pressure of the hydraulic fluid moves in a first direction to compress the energy absorbing medium.

3. The accumulator assembly of claim 1 wherein the movable barrier in the at least one accumulator containing a compressibility limiter is a diaphragm.

4. The accumulator assembly of claim 1 wherein the movable barrier in the at least one accumulator containing a compressibility limiter is a bladder.

5. The accumulator assembly of claim 1 wherein the energy absorbing medium is an inert gas.

6. The accumulator assembly of claim 5 wherein the energy absorbing medium is nitrogen.
7. The accumulator assembly of claim 1 wherein the energy absorbing medium is a spring.
8. The accumulator assembly of claim 2 wherein the compressibility limiter is a stroke limiter that stops the movement of the piston in said first direction at a predetermined point.
9. The accumulator assembly of claim 8 wherein the stroke limiter is adjustable to thereby vary the point at which the movement of the piston is stopped.
10. The accumulator assembly of claim 1 wherein there are two accumulators, a first accumulator containing a compressibility limiter and a second accumulator which does not contain a compressibility limiter.
11. The accumulator assembly of claim 10 wherein the first accumulator has a larger internal volume than the second accumulator.
12. A vertical roller mill in which the grinding force is supplied by a hydraulic cylinder having a piston side and a rod side, wherein said roller mill contains an accumulator assembly hydraulically connected to either the piston or rod side of the hydraulic cylinder, said accumulator assembly comprising at least two accumulators being hydraulically interconnected to the same source of hydraulic fluid, each accumulator containing an energy absorbing medium which is compressible when a movable barrier which separates the hydraulic fluid from the energy absorbing medium is acted upon by an increase in pressure of the hydraulic fluid, wherein at least one of said at least two accumulators contains a compressibility limiter which interrupts the compressibility of the energy absorbing medium within the accumulator and at least one

of said at least two accumulators does not contain a compressibility limiter so that its energy absorbing media may be fully compressed by the hydraulic fluid.

13. The vertical roller mill of claim 12 wherein the accumulator assembly is connected to the piston side of the hydraulic cylinder.

14. The vertical roller mill of claim 12 wherein the accumulator assembly is connected to the rod side of the hydraulic cylinder.

15. An accumulator that is connected to a source of hydraulic fluid, comprising a movable barrier which separates the hydraulic fluid from a compartment containing two distinct energy absorbing medium that are a first energy absorbing medium and a second energy absorbing media, wherein said movable barrier, when acted upon by an increase in pressure of the hydraulic fluid, will move in a first direction whereupon it will initially contact the first energy absorbing medium to thereby begin compressing said first energy absorbing medium and, when it moves further in said first direction, will contact the second energy absorbing medium to thereby begin compressing said second energy absorbing medium while still compressing said first energy absorbing medium.

16. The accumulator of claim 15, wherein the movable barrier is a piston.

17. The accumulator of claim 15, wherein the first energy absorbing medium is nitrogen gas and the second energy absorbing medium is a spring.